



# C<sup>3</sup> Demonstrator Cryogenics and Layout

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Snowmass

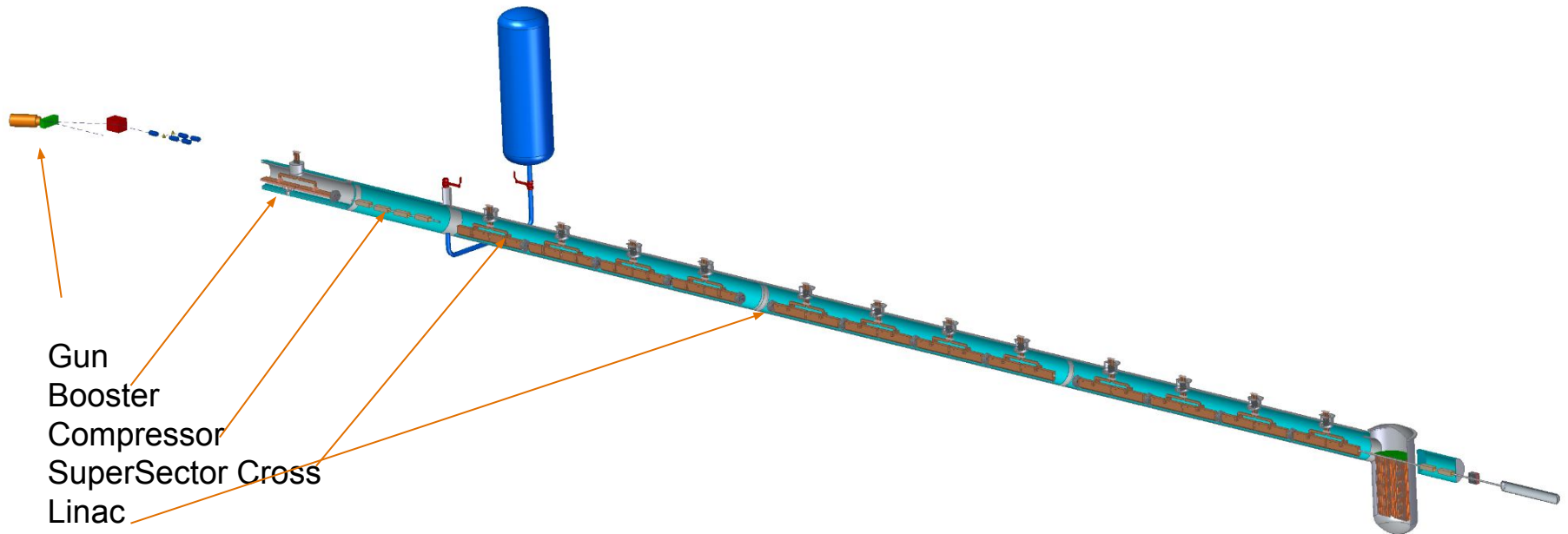
July 2022



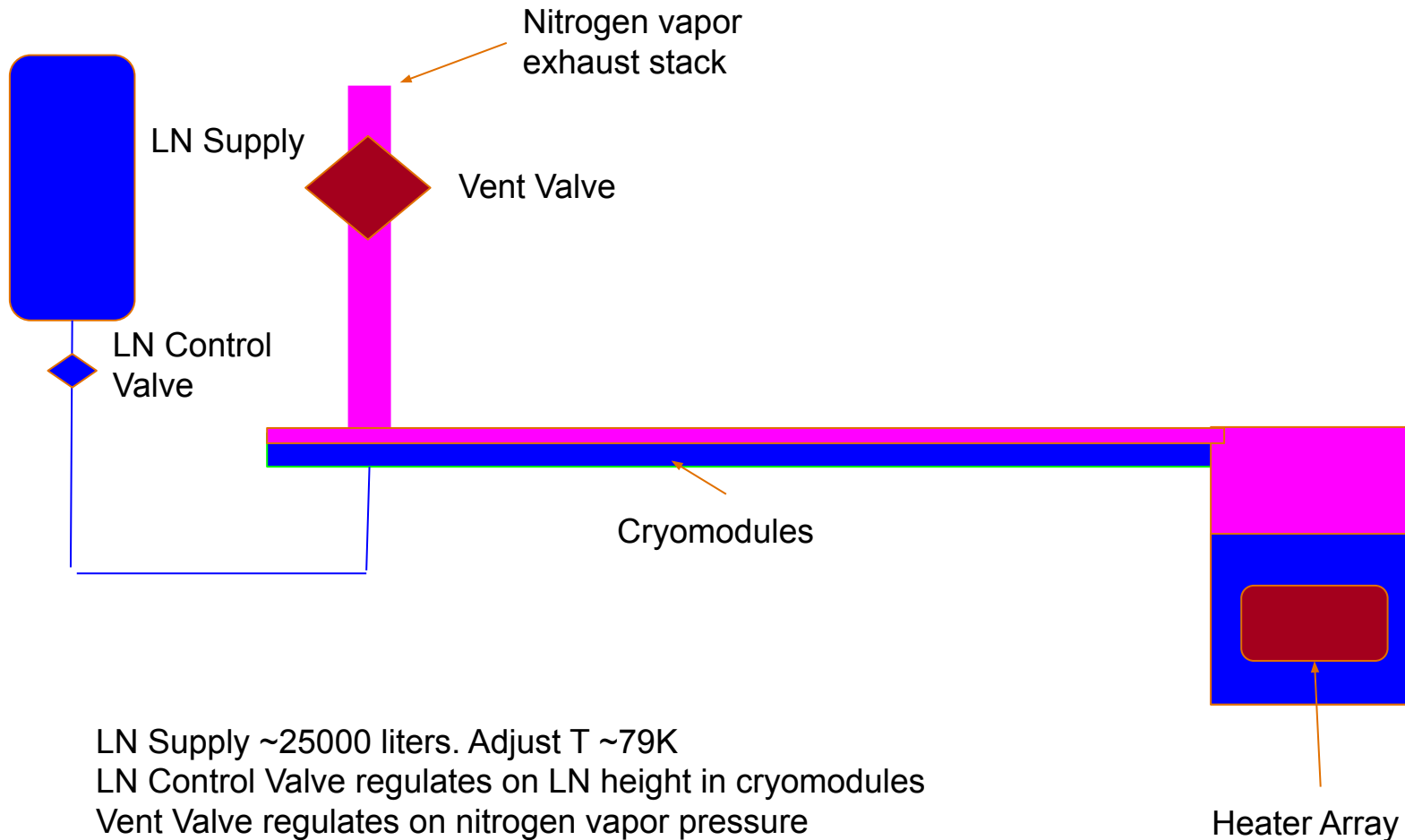
# Functionality



- Mode 1 - Normal Accelerator development
  - LN at nominal height above accelerator sections
  - low LN flow
- Mode 2 - High flow for vibration testing etc, up to 10 kg/sec



# Simplified Cryogenic Layout



# LN in, vapor out at “SuperSector Cross”

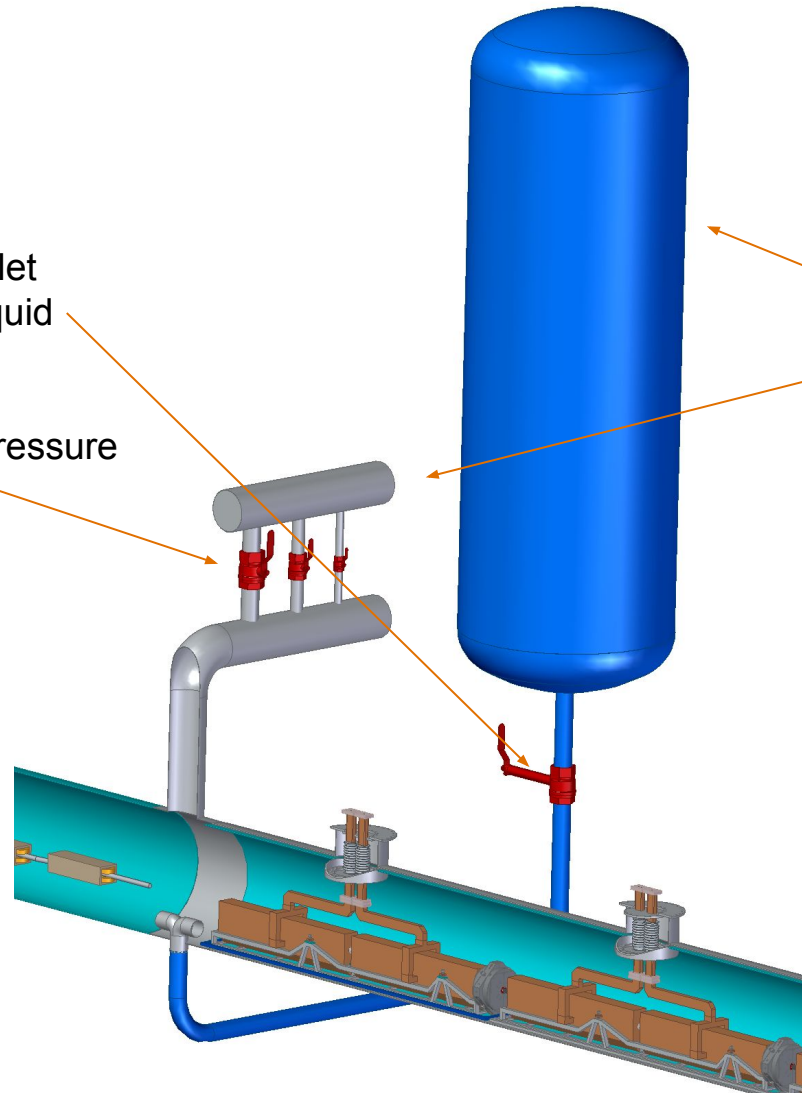


LN comes in from bottom, inlet control valve regulates on liquid level.

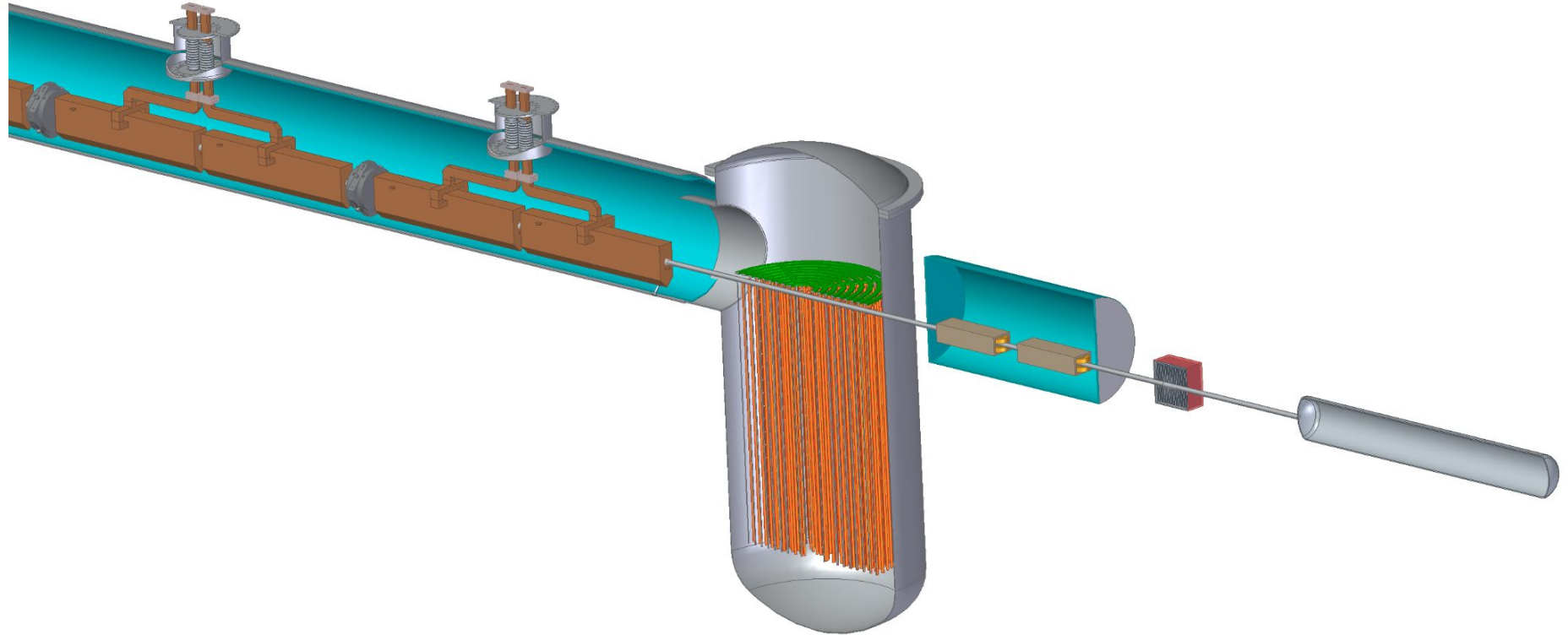
Outlet valves regulates on pressure of vapor in cryomodules.

Both may require some feed-forward.

LN Tank ~25000 liters  
Vent stack need to go suitably far away, as in over the hill



# Boiler



LN in boiler at same level as in cryomodules, covering Calrod array.